

Is there a need for intrapectoral injection in autologous fat transplantation to the breast? - An MRI volumetric study

[Herold C¹](#), [Ueberreiter K](#), [Cromme F](#), [Grimme M](#), [Vogt PM](#)

ABSTRACT

INTRODUCTION:

Autologous fat transplantation to the female breast is becoming generally accepted as a standard procedure in plastic surgery. Periglandular planes and also intrapectoral planes are used, based on the idea of having a highly vascularised matrix. To assess this surgical technique a reproducible and exact tool for volume analysis is necessary.

METHODS:

The volume of pectoral muscles and breast tissue including periglandular fat was analysed by MRI volumetry before and 6 months after autologous fat transplantation in 10 patients. The volume of the glandular tissue itself was also analysed to evaluate the effect of volume up-, and down-turns between the 6 months.

RESULTS:

A comparison of the volumes calculated with MRI volumetry preoperatively and postoperatively revealed a mean volume persistence of 64% (\pm 13%) within the pectoral muscle and of 81% (\pm 8%) within the periglandular fat. Glandular volume had a mean alternation of 7% (\pm 4%). In relation to the region of interest for breast volumetry the glandular tissue represented 15% (\pm 5%) preoperatively und 13% (\pm 4%) postoperatively.

CONCLUSION:

In autologous fat transplantation to the breast the periglandular plane is superior to the intramuscular plane in terms of volume persistence. As bolus injections of fat tissue must be strictly avoided, the pectoral muscles offer an additional receptor tissue for fat transplantation, and might be especially needed in smaller breasts to achieve the desired volume augmentation. The alternation of glandular tissue within the 2 points of time was low and in relation to the whole region of interest for breast volumetry rather inconsequential. Nevertheless consideration and subtraction of the glandular volume in mamma volumetry optimises the exactness of the volumetry.

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